

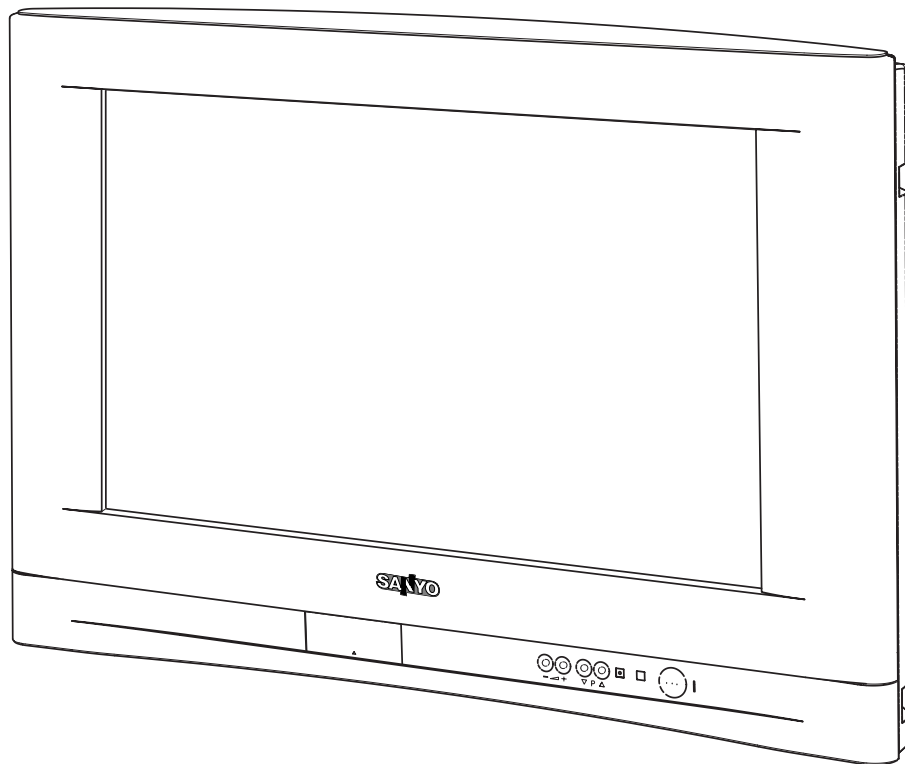
# SANYO

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**INSTRUCTION MANUAL**

**CE28DFN2-B  
CE32DFN2-B**

**Colour Television**



**Please read this Instruction book before using your television.  
We wish you many hours of pleasure from your new television.**

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**CAUTION: Please read and retain for your safety.** This unit has been engineered and manufactured to assure your personal safety. But improper use can result in potential electric shock or fire hazards. In order not to defeat the safeguards incorporated in this receiver observe the following basic rules for its installation, use and servicing.

## Installation

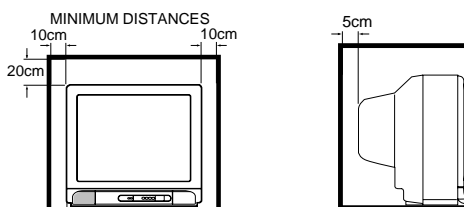
**Do not** allow anything to rest on the power cord. **Do not** locate this television receiver where the cord will be damaged by people walking on it.

**Do not** overload wall outlets and extension cords as this can result in fire or electric shock.

Slots and openings in the cabinet and in the back or bottom are provided for ventilation to ensure reliable operation and to protect it from overheating. These openings **must not** be blocked or covered. The opening **should never** be covered with a cloth or other material, and the bottom openings **should not** be blocked by placing the television receiver on a bed, sofa, rug, or other similar surface. This television receiver **should never** be placed near or over a radiator or heater.

This television receiver **should not** be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

**Do not** place your television receiver on an unstable stand, shelf or table. Serious injury to an individual, and damage to the television may result if it should fall. Your sales person can recommend approved stands or shelf and wall mounting instructions.



If the television is built into a unit, or enclosed, the minimum distances for ventilation must be maintained. Heat build up can reduce the life of your television, and can be dangerous.

## Use

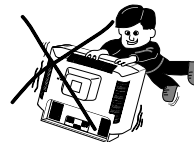
This television receiver should be operated only from the type of power source indicated on the television or as indicated in the Operating Instructions. If you are not sure of the type of power supply in your home, consult your sales person or your local power company.

**Never** add accessories that have not been specifically designed for this television.

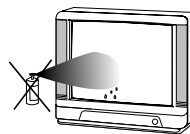
**Do not** drop or push objects into the television cabinet slots or openings. Some internal parts carry hazardous voltages and contact may result in an electric shock hazard. **Never** spill liquids of any kind on the television receiver. **Do not** place items such as vases containing liquid on top of the TV set.

**Do not** expose the television receiver to rain or use near water. For example, near a bathtub, kitchen sink, in a wet basement, etc.

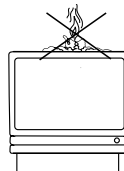
Before cleaning, unplug the television receiver from the wall socket.



**Never** stand on, lean on or push the television or its stand. **Never** allow children to play with the television or its stand. Serious injury may result if it should fall.



**Do not** apply liquid cleaners or aerosol cleaners directly onto the television receiver. Use a damp cloth for cleaning.



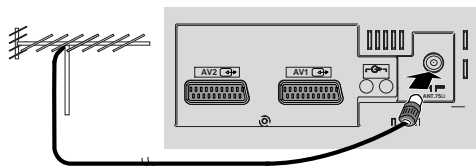
**Do not** place candles or hot objects upon the TV, next to it or behind it. Open flames must never be used near the TV set.

# INSTALLATION

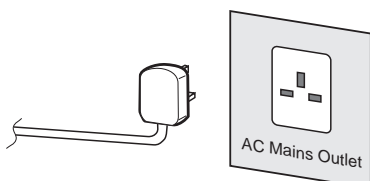
Please make sure that you have read the End-User section on page 2 before you activate Plug and Play.

## Step : 1 Connections ( Essential)

Connect your aerial cable socket to the back of the TV set. Fit the aerial cable as shown below or as shown opposite when AV equipment is connected.



Connect the power cord of the TV set to a wall outlet.



✂ The TV set is prepared for a mains voltage AC220~240V, 50Hz.



**WARNING!** High voltages are used in the operation of this set. Refer service to qualified service personnel.

When the TV set is not to be used for an extended period of time, it is advisable to disconnect the power cord from the power outlet.

✂ For all aerial problems please consult your local dealer.

### Important:

This equipment is fitted with an approved non rewirable UK mains plug. To change a fuse in this type of plug proceed as follows:

1. Remove the fuse cover and fuse.
2. Fit a new fuse which should be a BS1362 5Amp A.S.T.A. or BSI approved type.
3. Ensure that the fuse cover is correctly refitted.

If the fuse cover is lost or damaged the plug must **NOT** be used but replaced with a serviceable plug.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place. If the mains plug contains a fuse, this should have a rating of 5 Amp, ensure the fuse cover is correctly fitted. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5 Amp.

**Note:** The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13Amp socket elsewhere.

The wires in this mains lead are coloured in accordance with the following code:

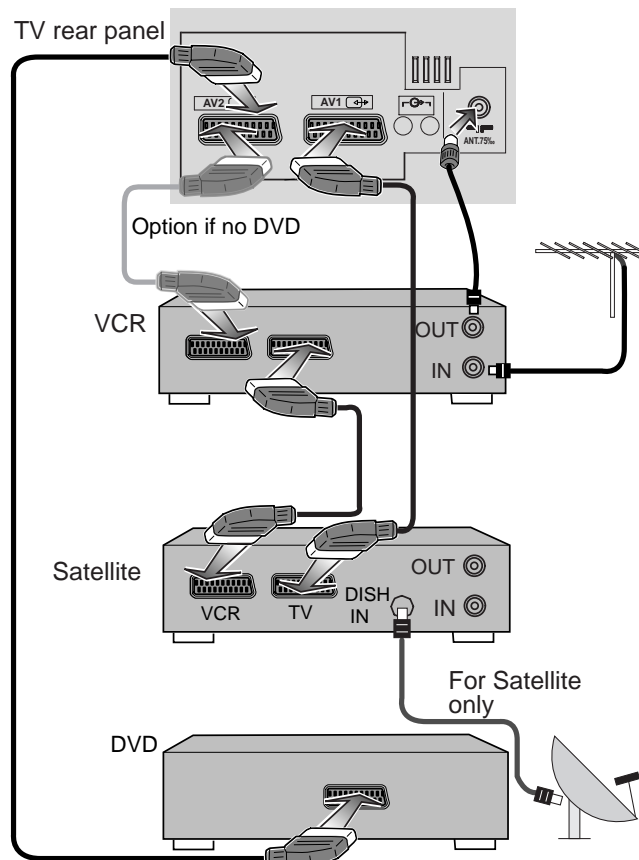
**Blue** -----> **Neutral**  
**Brown** -----> **Live**

1. The Blue wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
2. The Brown wire must be connected to the terminal with the letter "L" or coloured RED.
3. **Do not** connect either wire to the earth terminal in the symbol or coloured GREEN or GREEN and YELLOW.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the wires.

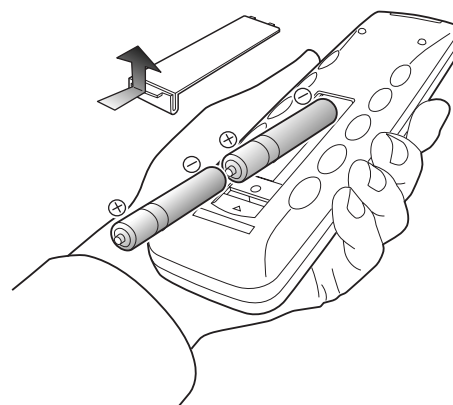
## ● Connecting DVD / VCR player or Satellite receiver.

We recommend that you connect all other equipment before Plug and Play. The following examples are our recommended standard connection. For further information please consult your local dealer.



Please refer to individual Instruction Manuals for each piece of equipment for their connection suggestions.

## Step : 2 Remote control battery installation



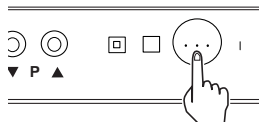
Install two "AA" 1.5 volt batteries so that the "+" and "-" marks on the batteries match the "+" and "-" marks inside the unit into the remote control handset.

# INSTALLATION

## Step : 3 Switching on / Plug & Play

Press the **Mains on off switch** on the front of the TV set.

The self-automatic tuning system called Plug and Play will start. The TV scans the analogue channels first and then switches to digital channel mode and scans digital channels. This could take up to 15 minutes. During automatic tuning, the TV displays the tuning status of analogue and digital channel tuning on the screen.



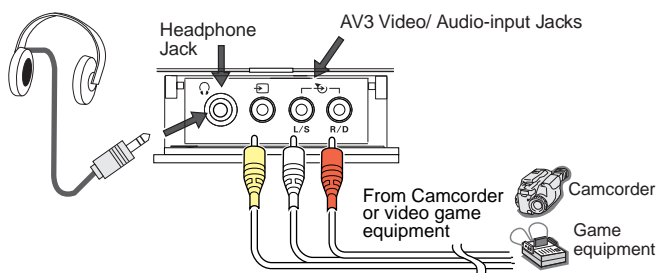
## TV front controls / Terminals

Press **P▲** and **P▼** increases or decreases the programme position.  
Press **▲+** or **▲-** increases or decreases the sound volume.

Mains ON/OFF

Power indicator.

### Front terminals



✓ To select the AV3 mode press the **TV/E** button repeatedly.

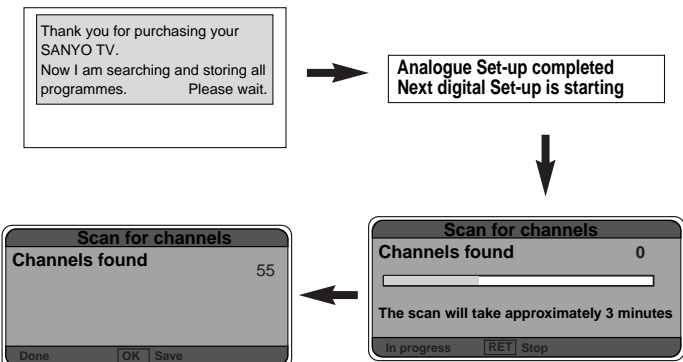
✓ When the headphones are inserted the sound from the TV speakers is muted.

3.5 mm Mini Headphone din

AV3 Video in

AV3 Left Audio in

AV3 Right Audio in



Press **OK** to save.



Press **OK** to Watch TV.

### Now the installation is complete!

After Plug & Play, Digital channels are stored in the programme positions shown in the All channel table.

Analogue channels will be automatically sorted as follows:

**Programme position 1** : BBC1

**Programme position 2** : BBC2

**Programme position 3** : ITV

**Programme position 4** : CH4 or S4C

**Programme position 5** : CH5

**Programme position 6** : ITV2

**Programme position 7** : channels in order found.

✓ If any other channels are available in your reception area, the remaining channels will be stored from programme position 7 in sequence as found.

✓ If you move to another city or cable is installed, please follow the description "**TUNING**". (on page 13).

✓ This procedure only appears the first time you switch on.

# REMOTE CONTROL - Digital Use

## Sound mute

To switch the sound from the speakers.  
The sound changes as follows;  
**Normal volume -> Half volume -> Mute**

## TV/AV switch

To switch from Digital TV, AV1, AV2 or AV3 mode press repeatedly.

## Direct programme selector

For direct access to programmes using **(0-9) numeric buttons** for example for channel 23, press **2** and **3** numeric buttons.

## Volume up/down

To adjust the sound level.

## MENU

To switch on the screen display menu on/off. See page 6.

## Cursors

To select the sub menu items in the menu display, Up, Down, Left, Right.

## Guide

To call up the Digital TV schedule guide display on the screen. (refer to page 11).

## Surround mode selector

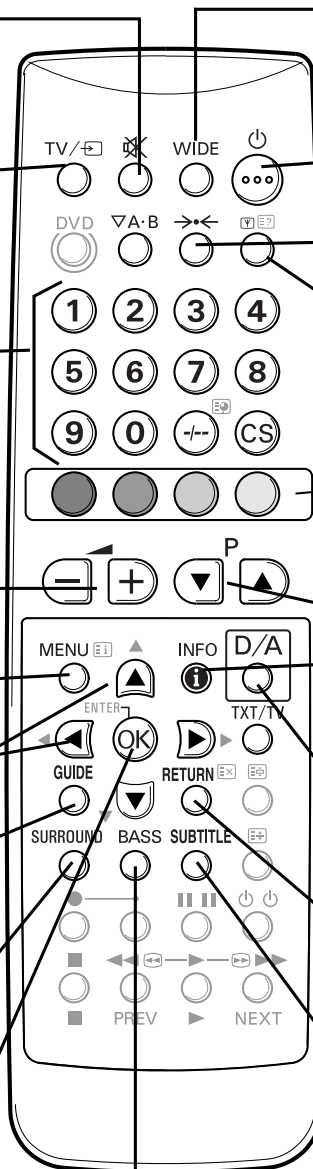
To select the surround mode, ACTIVE, MONO or OFF.

## OK

To save the setting in the menu, or to call up the All channel table.

## Bass selection

To get an emphasised bass sound, ON or OFF.



## Screen mode selector

To select the screen mode, AUTO, NATURAL, ZOOM14:9, TITLE IN 14:9, ZOOM 16:9, TITLE-IN 16:9, FULL or NORMAL.

## Standby/Power on/off

To switch the TV on and off. Also see page 14.

## Picture mode selector

To access a series of picture modes: **PERSONAL, STANDARD, ECO** and **DYNAMIC**.

## System selector

To select the colour system in the AV mode, AUTO, PAL, NTSC 4.43 or NTSC3.58.

## Coloured buttons

Some channels have interactive services. Use the red button to enter and other colours as directed. Also used in menu functions.

## Programme up and down

To select the next programme number or previous programme number.

## INFO

Shows the current and next programme on the selected channel. (refer to page 11).

## D/A selector

To switch between analogue and digital channels.

## Return

Returns back to previous screen in menu. Exits interactive mode.

## Subtitle

Displays sub titles On and Off. You may need to switch to title in by pressing WIDE button. See page 17.

# DIGITAL OPERATION

## Main menu

The main menu screen takes you to many functions in the TV. The buttons below are the main buttons and their uses.

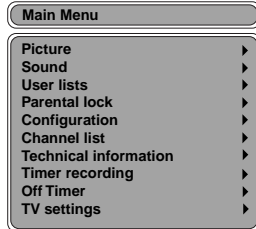
**MENU button** - Enters and exits menus.

**Cursors** ▲ and ▼ moves up and down in each selected menu.

**Cursor** ◀ changes levels, moves to the left and returns to previous menu.

**Cursor** ▶ changes levels, moves to the right and enters next menu.

**RETURN button** - Returns to the previous screen.



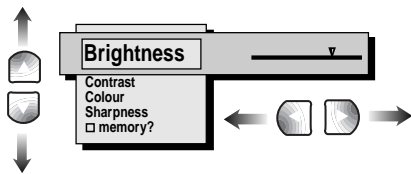
## Picture menu

Refer to bar at bottom of screen for added help in which buttons to use.

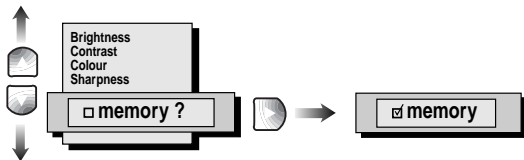
1. Press the **MENU button** and select **Picture** using ▲ or ▼ buttons.

2. Press ▶ to select.

Select using ▲, ▼ buttons and adjust to obtain the best picture settings for your environment using ◀, ▶ buttons.



**Tint** : Colour phase if NTSC equipment is detected.



### ■ Storing personal picture preferences

If you have altered any of the settings in the Picture menu you can store them. You can be recall again later.

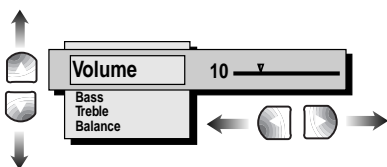
In the picture menu select **memory** by pressing the ▼ button.

Press the ▶ button, a tick appears in the box and the settings are stored.

Press the **MENU button** repeatedly to exit the menu.

## Sound menu

Press the **MENU button** and select **Sound** using ▲ or ▼ buttons, press the ▶ button to enter.



Select and adjust to obtain the best sound settings for your environment using ▲, ▼ and ◀, ▶ buttons.

Press **MENU** to return to **Main Menu**. These settings automatically store when you exit the menu.

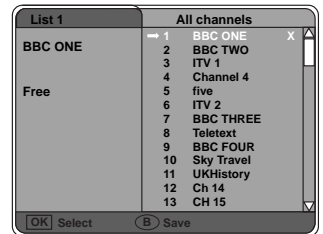
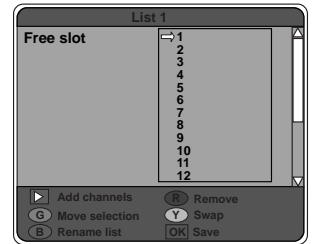
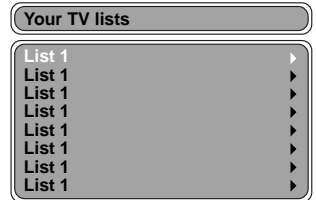
Press **MENU** repeatedly to exit menu.

## User Lists

You can set up different user lists to allow quick access to your favourite channels.

### ■ Setting User Lists

1. Press **MENU button** to select main menu.
2. Select **User Lists** by pressing ▼ button.
3. Select Your TV lists menu by pressing ▶ button.
4. Select a List eg. List 1 by pressing ▲ or ▼ button. Enter by pressing ▶ button
5. Press ▶ to add channels to your list. Use ▲ or ▼ to highlight channel selection. Press **OK** to add to your list, a X will appear next to the channel.
6. Repeat to add all the channels you want in your list.
7. Press **Blue button** to save selection.
8. Add more channels, move selection, rename list, remove or swap or press the **OK** button to finish the list or **MENU** to exit.



### ■ Move selection.

To change the order of channels in your list.

1. Select the channel you wish to move using the ▲ or ▼ buttons..
2. Press the **Green button** to select the channel.



3. Use ▲ or ▼ to move to a different position

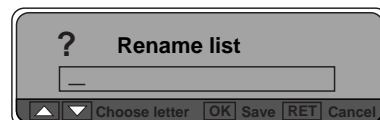
4. Press the **Green button** to save the new order.

Repeat steps 1-4 until all channels are in the order you need.

5. Add more channels, move selection, rename list, remove or swap or press the **OK** button to finish the list or **MENU** to exit.

### ■ Rename List.

1. Press **Blue button** to rename your list. see picture.



2. Use ◀ or ▶ to move left or right.

3. Use ▲ or ▼ buttons to choose a letter, symbol or number. (A-Z, 0-9, -, + etc.)

4. Press **OK** to save new user list name.

5. Add more channels, move selection, rename list, remove or swap or press the **OK** button to finish the list or **MENU** to exit.

## DIGITAL OPERATION

### ■ Remove a channel.

1. Highlight a channel to be removed.
2. Press **Red button** and it will be deleted, the screen shows a red line through it. To deselect a deleted channel press **Red button** again.

✓ Red button refers to coloured buttons Red, Green, Yellow and Blue. Do not get confused with larger Red Standby button.

3. Add more channels, move selection, rename list, remove or swap or press the **OK** button to finish the list or **MENU** to exit.

### ■ Swap channels.

1. Choose a channel that you wish to swap with another by pressing the **▲** or **▼** buttons . Press the **Yellow button** to enter the Swap screen.



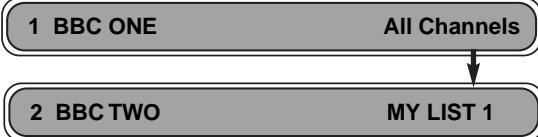
2. Use **◀**, **▶** and **numeric buttons** to enter channel number and press **OK** to swap.( When in swap screen you can press **RETURN** repeatedly to take you back a screen).

3. Add more channels, move selection, rename list, remove or swap or press the **OK** button to finish the list or **MENU** to exit.

4. Press **Menu** to return to normal picture.

## Using User Lists

When watching a digital channel. Press the **▶** button. A title bar appears at the bottom of the screen with each press of the **▶** button it will select All channels and all your set user lists.



Use the **▲** or **▼** buttons to browse through the list, the TV will switch to this channel. ( Only channels in the selected list will be browsed).

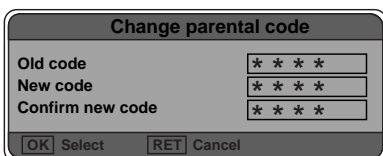
## Parental lock

Parental lock can be used to block entry into the Menu functions and to allow you to block access to selected channels.

The first time you use this function the code numbers are 1 2 3 4. If you forget the code there is a default code 6 9 3 1 this will always give you access to Parental lock.

### ● How to change the code to your own preference.

1. Press **MENU** to select **Main Menu**.
2. Using **▲** or **▼** buttons select **Configuration** and press **▶** to enter.
3. Press **▼** to select **Change parental code**. Press **▶** to enter.
4. Enter **Old code** into yellow box which is highlighted, using the 0-9 numeric buttons (If this is the first time you have selected this function it will be 1 2 3 4). Use **◀** button to go back and re-enter an incorrect digit.



5. Select **New code** by pressing **▼** button, and enter your new code eg. 4 3 2 1.
  6. Select **Confirm new code** by pressing the **▼** button, and re-enter the code 4 3 2 1.
  7. If you are happy with the new code press **OK** to select. A prompt Save new code? will appear. Press the **Red button** to confirm.
- ✓ If Invalid code! appears you have entered the incorrect old code. Press **RETURN** button and try again.

Press **MENU** to return to normal picture.

### ● To activate parental lock.

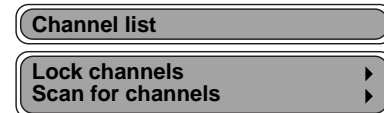
1. Press the **MENU** button to select **Main menu**.
2. Using **▲** or **▼** buttons select **Parental lock**. Press **▶** to enter.
3. Enter your code and press **OK** to save. If wrong code is entered Invalid code! will appear and you have to repeat 1-3 again.



✓ Parental lock is now activated you will now have to enter the code every time before you can enter Main menu unless parental lock is deactivated. See page 8.

### ● Blocking access to selected channels.

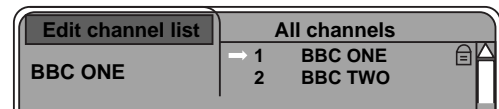
1. Press the **MENU** button to select **Main menu**.
2. Using **▲** or **▼** buttons select **Channel List**. Press **▶** to enter.



3. Select **Lock channels** Using **▲** or **▼** buttons. Press **▶** to enter.



4. Using **▲** or **▼** buttons select a Channel you wish to lock.
5. Press **Yellow button**, a locked symbol will appear to show it is selected. To de-select press **Yellow button** again. Repeat until all channels you wish to lock are selected.



6. Press **OK** to Save.

This takes you back to **Channel List Menu**.

To return to normal picture press **MENU** button.

# DIGITAL OPERATION

## Parental lock

### ● How to watch a locked channel.

1. Select a locked channel, Parental lock display appears.



2. Press **OK** button, enter the Parental code and press **OK** again.



3. The channel is temporarily unlocked until the channel is changed.
4. Press **MENU** button to return to normal TV picture.

✓ If Parental lock is activated and you wish to record this locked channel, deactivate first before setting timer recording.

### ● To deactivate parental lock.

1. Press the **MENU** button to select **Main menu**.
2. Enter the Parental code.
3. Press **OK** to enter menu functions.
4. Use the **▲** or **▼** buttons to select Parental unlock, press **▶** to enter.
5. Press **Red** button to deactivate.



6. Press the **MENU** button to exit.

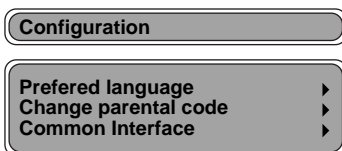
✓ Main menu screen will show either Parental Lock or Parental Unlock ( if it is use).

✓ Once you have activated Parental Lock each time you need to enter the Main Menu you will need the code.

## Configuration

### ● Preferred language.

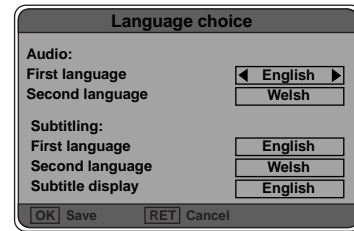
1. Press **MENU** to select Main Menu.
2. Select Configuration by using **▲** or **▼** buttons. Press **▶** to enter.
3. Press **▼** button to highlight **Preferred language** and press **▶** to enter.



**Audio** - Select your preferences as required.

Example. If you speak Welsh (Gaelic) and prefer to receive Welsh (Gaelic) audio when it is transmitted then select Welsh (Gaelic) for your first Language and English as your second.

4. Press **◀** or **▶** to select Language, press **▲** or **▼** buttons select second language and change your preference using **◀** or **▶** buttons.



**Subtitling** - Select your preferences as required.

If you wish for Welsh or Gaelic Subtitles instead of English to be shown (when available) then select your preference for the first language.

Example: as shown will give you English first language, if not available Welsh may be shown.

5. To change press **▲** or **▼** buttons to highlight the box and press **◀** or **▶** to select your preferred First language and repeat for Second language.
6. Press **▼** button to select Subtitle display. This can be set ON or OFF by pressing **◀** or **▶** buttons.
7. Press **OK** to Save.

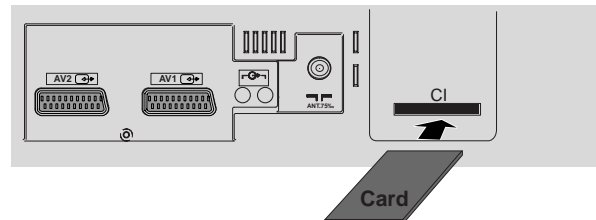
This takes you back to Configuration menu screen.

**Change Parental Code** - See page 7 under Parental lock.

Press **MENU** to return to normal TV Picture.

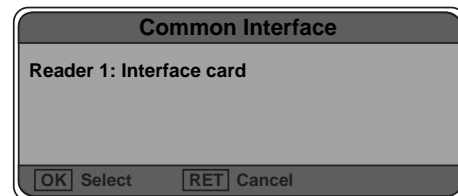
### ● Common Interface

This TV set provides a common Interface slot on the rear of the TV set.



1. Press **MENU** to select Main Menu.
2. Select Configuration by using **▲** or **▼** buttons. Press **▶** to enter.
3. Press **▼** button to highlight **Common Interface** and press **▶** to enter.

The following screen appears to show that a card is inserted.



When you select OK, follow the on screen directions. This will vary depending on the type of card inserted.

### Important!

The TV should be turned off by the Mains Power switch when inserting or removing the Common Interface Card, otherwise it may cause damage to the card or the TV set.

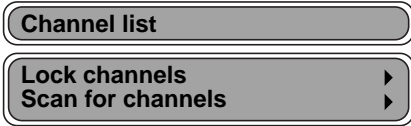


# DIGITAL OPERATION

## Channel List

### ● Edit channel list

1. Press **Menu** button to select **Main Menu**.
2. Select **Channel List** by using **▲** or **▼** buttons. Press **▶** to enter.



3. Select **Lock channels** by using **▲** or **▼** buttons. Press **▶** to enter.

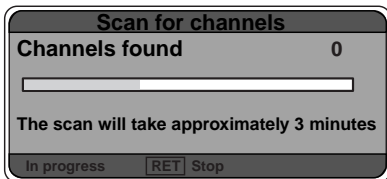


4. To delete channels from this list use **▲** or **▼** buttons to highlight a channel.
6. To lock or unlock parental locked channels, select the channel and press the yellow button. This will lock or unlock the channel.
7. Press the **OK** button, selected channels will be locked / unlocked and parental lock/unlock stored.

You will go back to Channel List menu.

### ● Scan for channels

1. Press **Menu** button to select **Main Menu**.
2. Select **Channel List** by using **▲** or **▼** buttons. Press **▶** to enter.
3. Press **▼** to select **Scan for channels**. Press **▶** to enter.



This will scan all available channels. This is a useful function if you delete channels and want to get them back later.

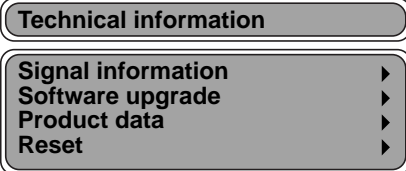
4. Press **OK** to save (All Channels).
5. Press **OK** again to watch normal TV picture.

✓ Parental lock is still saved after the scan for channels has been initialised.

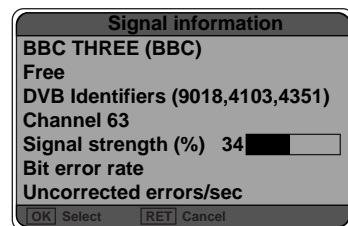
## Technical Information

In this section a lot of the information will only be useful to a technician. Some parts are however useful to you. If there is an upgrade in software you will need this section to upgrade your TV from time to time.

1. Press **Menu** button to select **Main Menu**.
2. Select **Technical Information** menu by using **▲** or **▼** buttons. Press **▶** to enter.



3. Select **Signal information** by using **▲** or **▼** buttons and press **▶** to enter.



This screen cannot be altered but if you have a problem you may need to refer to this screen for some data.

4. Press **Return** or **OK** button to go back to Technical information screen.

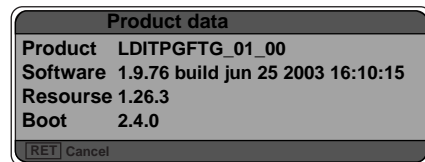
### ■ Software upgrade

1. Press **▼** button to select **Software Upgrade** screen. Press **▶** to enter.



This looks for any new software upgrades that maybe transmitted at any time.

2. Press **Return** button to go back to Technical information screen.
3. Select **Product Data** by using **▲** or **▼** buttons and press **▶** to enter.



This is useful to service engineers.

4. Press **Return** button to go back to Technical information screen.
5. Press **▼** button to select **Reset** screen. Press **▶** to enter.



If you press Red button to confirm it will return all settings to factory (default) mode for digital channels. To start a scan for all available channels switch the TV set Off and On again and press D/A button to select digital.

When the TV set has been initialised press **OK** to Save and **OK** to watch TV picture.

# DIGITAL OPERATION

## Timer recording

- This feature is used when you wish to record a digital channel on your VCR.
- In order to record digital channels you cannot watch another digital channel when recording. Digital channels are recorded using AV2.
- Timer recording will switch your TV set to the digital channel at the preset time until the finish time is reached.
- Whilst timer recording is running you can switch to Analogue TV.
- You can also switch your TV into Standby mode, the timer recording will switch your TV on and off back into Standby when finished.

- ✓ If you want to switch to another digital channel you must first cancel recording by pressing the Return button.
- ✓ If channel has been locked (Parental lock) and you have set timer record for locked channel it will not record. You have to deactivate parental lock first.

1. Press **Menu** button to select **Main Menu**.
2. Select **Timer recording menu** by using **▲** or **▼** buttons. Press **▶** to enter.

Current events				
Channel	Date & time	End		
1	(not set)	--/-- --:--	--:--	(not set)
2	(not set)	--/-- --:--	--:--	(not set)
3	(not set)	--/-- --:--	--:--	(not set)
4	(not set)	--/-- --:--	--:--	(not set)
5	(not set)	--/-- --:--	--:--	(not set)
6	(not set)	--/-- --:--	--:--	(not set)
7	(not set)	--/-- --:--	--:--	(not set)
8	(not set)	--/-- --:--	--:--	(not set)
9	(not set)	--/-- --:--	--:--	(not set)
10	(not set)	--/-- --:--	--:--	(not set)
11	(not set)	--/-- --:--	--:--	(not set)
12	(not set)	--/-- --:--	--:--	(not set)

OK Edit/Add event Delete Cancel

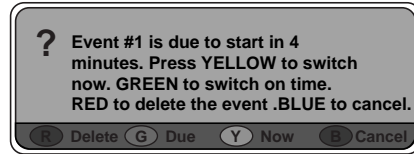
3. Highlight a row and press **OK** button. **Set events** screen appears.

Set event	
Channel	◀ BBC ONE ▶
Wake-up day	17/07/03
wake-up time	10:52
Finish time	11:28
Repeat	No repeat

OK Save RET Cancel

4. Select channel by pressing **◀** or **▶** buttons and rotate through all available channels.
5. Press **▼** button to select and highlight yellow **Wake-up day** box. Enter your day, month and year by using numeric buttons (0-9). and using **◀** or **▶** buttons to move left and right.
6. Press **▼** button to select and highlight yellow **Wake-up time** box. Enter your time by using numeric buttons (0-9). and using **◀** or **▶** buttons to move left and right.
7. Press **▼** button to select and highlight yellow **Finish time** box. Enter your time by using numeric buttons (0-9). and using **◀** or **▶** buttons to move left and right the time you wish to finish.
8. Press **▼** button to select and highlight yellow **Repeat** box. Press **◀** or **▶** buttons to enter **No repeat**, **daily**, or **weekly**. This would be a useful feature if you have a favourite programme that you dont want to miss and it is shown on a daily or weekly schedule.
9. Press **OK** to save settings, you can repeat again or press **RETURN** button to go back to Main menu. Press **MENU** to exit.

Once you have set the timer recording, 5 minutes before the selected time the following screen appears.



You can either press the **Red** button and delete, press the **Green** button and the channel will change at the due time, press the **Yellow** button to change to the channel now or press the **Blue** button to cancel settings.

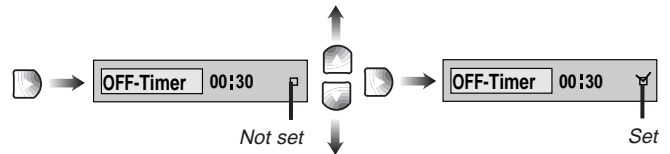
- ✓ If you want to switch to another digital channel you must first cancel recording by pressing the **Return** button.

## Timer menu

### Off-timer setting

The Off timer will switch the TV set into the standby mode when the selected time period has elapsed.

Press the **MENU** button to select main menu. Press **▲** or **▼** buttons to select **OFF Timer** - Press **▶** to enter **OFF Timer** menu.



Press **▶** to highlight time period yellow. Press **▲** or **▼** buttons the time changes in 30 minute steps. The maximum time is 2:00hrs.

When you are ready to store your settings press the **▶** button and the time colour changes to green. The tick appears as shown above and its colour changes to yellow.

If you have set the off timer, then one minute before the TV switches, a display appears on the screen.

Press **MENU** button or **RETURN** button twice to return to normal TV picture.

- ✓ If the TV set is switched off by the **Mains Switch** or you enter the preset mode, the timer settings will be cancelled.

# DIGITAL OPERATION

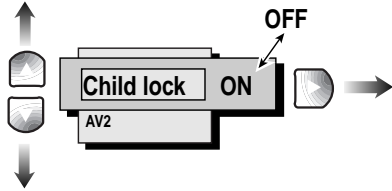
## TV Setting menu

### ■ Child lock

You can prevent small children from operating the TV with the front buttons of the TV set.

Press the **MENU** button to select main menu.

Press **▲** or **▼** buttons to select **TV settings**. Press **▶** to enter menu.

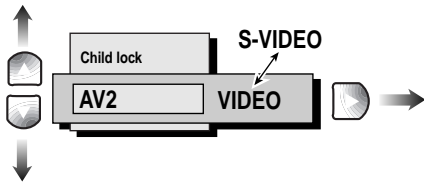


Press **▲** or **▼** buttons to select. **Child lock** can be set to **ON** or **OFF**. Press **◀** or **▶** buttons to select.

The child lock mode will be reset to "OFF" when the TV set is switched off with the **Mains ON/OFF** Ⓛ switch.

### ■ Setting of AV2 input mode

If you use a VCR which has S-VHS, you should connect it to AV2 and change the AV2 menu to S-VIDEO.



Press **▼** to select **AV2** and select **VIDEO** or **S-VIDEO** by pressing **◀** or **▶** buttons.

Press **MENU** button or **RETURN** button twice to return to normal TV picture.

## Guide

The guide shows the digital TV schedule for the next 2 hours. The guide can show all channels or any set user lists ( see page 6).

Press the **▶** button to select all channels or a user list then press **GUIDE** button.

A schedule will appear on the screen.

TV Schedule User list 1				Wed 12:44 20/0802003
	12:00	Today		14:00
BBC 1	XXXX	XXXX	XXXX XX	XXXX
ITV	XXXX	ITV Lunchtime News	XXXX	
Channel 4	XXXX			XXXX
five	XXXX	XXXX		XXXX
UKHistory	XXXX	XXXX		XXXX
	12:30-12:50	ITV Lunchtime News Main national & International news		
		Info		

Use the **▲** or **▼** buttons to move up and down the channel list. Use **◀** or **▶** buttons to highlight the programmes below the transmission time, progress and a brief programme explanation will be displayed.

Press the **i** button to get more information on that programme.

## Info button

When you press the info button in digital mode you will be displayed a cut down guide showing only the channel you are currently on.

ITV 1		Wed 11:44 20/0802003
11:30-12:30 I.....	12:30-12:50 ITV Lunchtime News	
Main national & International news		
◀▶ Now Guide TV Schedule Prog+ Change channel		

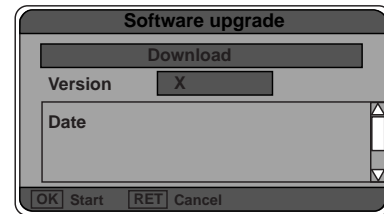
Press the **◀** or **▶** buttons to select current programme or next.

Press the **GUIDE** button to go to the full guide. Press the **P▲** or **P▼** buttons to change to the channel.

## Programme Download

Once you have started the upgrade process you must not interrupt it (disconnect or separate it from the mains supply) under any circumstances. Do not press any key on the remote control or the front of the cabinet. If you interrupt the upgrade process the IDTV may be defective afterwards.

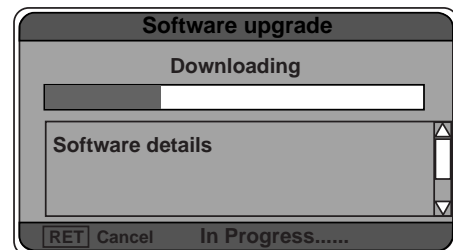
From time to time upgrades will become available. When this happens the following screen appears.



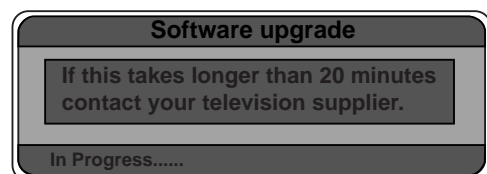
To upgrade press the **OK** button and the following screen will appear.



Press **OK** to start, this automatically downloads for you. The following screen appears.



The following screen appears to show that the upgrade is nearly finished. Once this screen disappears the upgrade is complete.



# REMOTE CONTROL - Analogue

## Sound mute

To switch the sound from the speakers.  
The sound changes as follows;  
**Normal volume -> Half volume -> Mute**

## TV/AV switch

To switch from TV, AV1, AV2 or AV3 mode press repeatedly.

## Nicam/Bilingual selector

To switch the sound mode as follows;  
**NICAM** or **MONO** in the stereo programmes.  
**A** or **B** in the bilingual programmes. If the nicam or stereo sound reception is poor in quality, you can switch to **MONO** sound reception by pressing **A•B** button. This operates only analogue channel mode.

## Direct programme selector

For direct access to programmes using **(0-9) numeric buttons** in analogue and digital. For selection of analogue programme position 10 - 99, for example 23, first press **-/-** button and press **2** and **3** numeric buttons.

## Volume up/down

To adjust the sound level.

## MENU

To switch on the screen display menu on/off.  
Also see page 12.

## Cursors

To select the sub menu items in the menu display.

## Surround mode selector

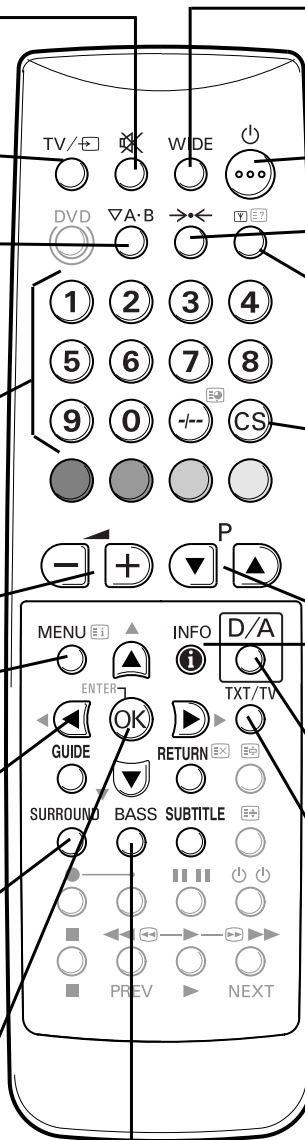
To select the surround mode, **ACTIVE**, **MONO** or **OFF**.

## OK

To save the setting in the menu.  
(also refer to CS button).

## Bass selection

To get an emphasised bass sound **ON** or **OFF**.



## Screen mode selector

To select the screen mode, **AUTO**, **NATURAL**, **ZOOM14:9**, **TITLE IN 14:9**, **ZOOM 16:9**, **TITLE-IN 16:9**, **FULL** or **NORMAL**.

## Standby/Power on/off

To switch the TV on and off.  
Also see page 16.

## Picture mode selector

To access a series of picture modes: **PERSONAL**, **STANDARD**, **ECO** and **DYNAMIC**.

## System selector

To select the colour system in the AV mode, **AUTO**, **PAL**, **NTSC 4.43** or **NTSC3.58**.

## Channel mode selection

To enter channel number of the station directly. This operates in the analogue channel mode only. Press once to show current channel number. Press a second time to show C-, enter the channel you require using the 0-9 buttons. Press the OK button to memorise

## Programme up and down

To select the next programme number or previous programme number.

## INFO

In the analogue mode, it displays the programme information such as current programme number, stereo status and remaining time if set, for about 5 seconds.

## D/A selector

To switch between analogue and digital channels.

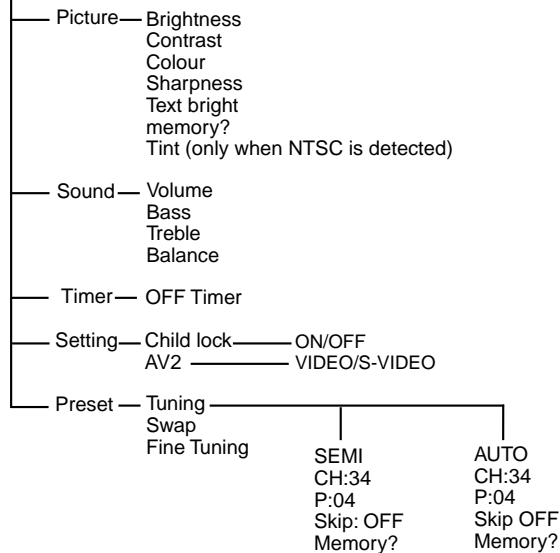
## Teletext/TV selector

To switch TV, MIX and Teletext mode.

# MENU OPERATION - Analogue channels

Many of your TV's functions are controlled through the menu function.

## MENU

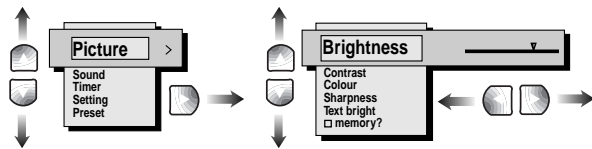


During the menu operation the following buttons are used.

- MENU** : To enter the menu function.
- : To go back and to exit the menu function.
- : To navigate up and down in the menus.
- : To navigate forwards to the next screen or to activate settings.

## Picture menu

- Press the **MENU** button to select main menu, select **Picture** using **▲** or **▼** buttons.



- Press **▲**+ to enter. Select and adjust to obtain the best picture settings for your environment.

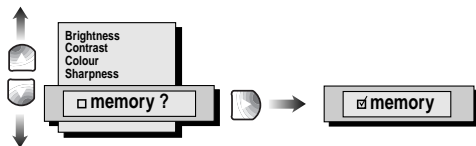
**Text bright** : Brightness of Teletext screen  
MINIMUM / CENTRE / MAXIMUM.

**Tint** : Colour phase if NTSC equipment is detected.

### Storing picture preferences

If you have altered any of the settings in the Picture menu you can store them. You can be recall again later.

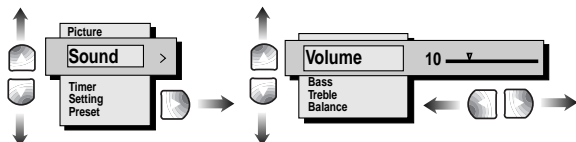
In the picture menu press **P▼** to select **memory**.



Press the **▲**+ button, a tick appears in the box and the settings are stored.

## Sound menu

- Press the **MENU** button to select main menu and using **P▲** or **P▼** select **Sound**.
- Select and adjust to obtain the best sound settings for your environment using **P▲**, **P▼**, **▲**+ or **▲**-.



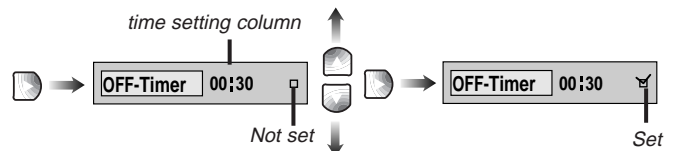
- Press **MENU** button repeatedly to exit.

## Timer menu

### Off-timer setting

The Off timer will switch the TV set into the standby mode when the selected time has elapsed.

- Press the **MENU** button to select main menu. Press **P▲** or **P▼** to select **Timer**.
- Press **▲**+ to enter **OFF** Timer.
- Press **▲**+ button, and highlight time setting column by pressing the **P▲** or **P▼** buttons.



When the time setting column is selected its colour changes to yellow. The time changes in 30 minute steps. The maximum time is 2:00hrs. When you are ready to store your settings press the **▲**+ button and the setting column numbers colour changes to green. The tick appears as shown above and its colour changes to yellow.

If you have set the off timer, then one minute before the TV switches, a display appears on the screen.

- Press the **MENU** button repeatedly to exit the menu.

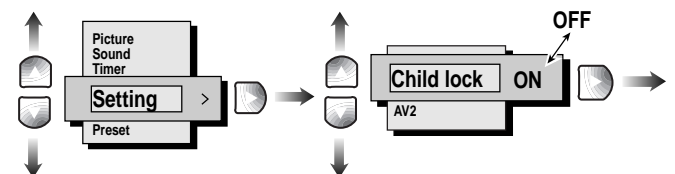
*∕ If the TV set is switched off by the **Mains Switch** , or you enter the preset mode, the timer settings will be cancelled.*

## Setting menu

### Child lock

You can prevent small children from operating the TV with the front buttons of the TV set.

- Press the **MENU** button and select main menu.
- Press **P▲** or **P▼** to select **Setting**, press **▲**+ to enter **Child lock / AV2** menu.



- Press **P▲** or **P▼** to select Child lock, press **▲**+ to select **ON** or **OFF**.

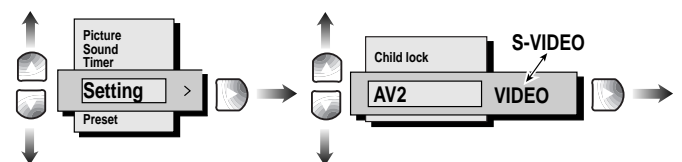
The child lock mode will be reset to "OFF" when the TV set is switched off with the **Mains ON/OFF** switch.

## Setting menu

### Setting of AV2 input mode

If you use a VCR which has S-VHS, you should connect it to AV2 and change the AV2 menu to S-VIDEO.

- Press **P▼** to select AV2, press **▲**+ or **▲**- to select **S-VIDEO / VIDEO**.



- Press **MENU** button repeatedly to exit.

# MENU OPERATION - Analogue channels

## Preset menu

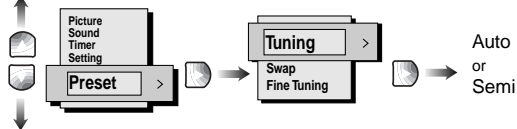
The preset menu can be used to tune new channels, to reorder channels and their programme positions, and to make fine adjustments to the tuning.

There are two ways to tune in new channels.

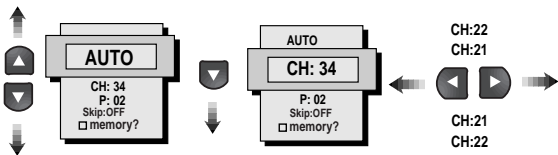
- Auto** : Searches for all channels and stores them automatically.
- Semi** : Manual search to add channels.

### Tuning - Auto

1. Press the **MENU** button to select main menu.
2. Using **▲** or **▼**, select **Preset**, press **▶** and select **Tuning** using **▲** or **▼** buttons.



3. Press **▶** to select **Auto** and **▼** to select **Channel (CH:34)** as shown.



Press the **◀** or **▶** all available channels are stored.  
To cancel this tuning operation, press the **MENU** button repeatedly.

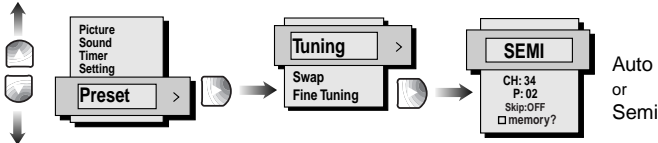
After completing this procedure, the TV set returns to normal TV mode and selects programme position "01".

✓ You can change the order of the station selection, by using the channel swapping function detailed later.

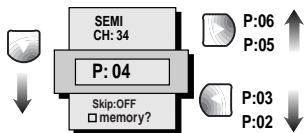
You do not need to use Memory function at this stage as all channels are automatically saved.

### Tuning - Semi

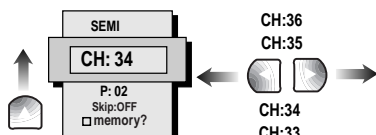
1. Press the **MENU** button to select main menu.
2. Using **▲** or **▼**, select **Preset**, press **▶** and select **Tuning** using **▲** or **▼** buttons.



3. Press **▶** to select **Semi** and **▼** to select **Programme position (P:04)** as shown where you want to store a channel.(eg. CH4)



4. Select the channel search (CH:34) and start searching by pressing the **◀** or **▶** buttons.

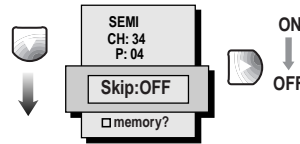


5. When a channel is located searching stops, If you do not want this channel press **◀** or **▶** to search again.

✓ You can enter a channel number directly with the 0-9 numeric buttons if you know the number.

### Skip

**Skip ON** : in normal operation when the **▲** or **▼** button is pressed this position will be skipped.

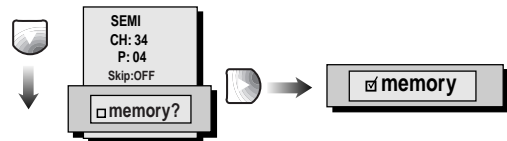


**Skip OFF** : Position is not skipped when **▲** or **▼** button is pressed.

To select Skip Press **▼** and press **◀** or **▶** to set to **ON** or **OFF**.

✓ You can still view a programme position that has been skipped by using the numeric buttons to select the programme position directly.

6. Select memory by pressing the **▼**. Press **▶** a tick indicates the channel is now stored.



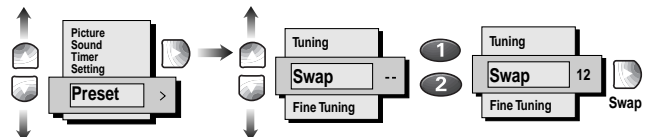
Press **MENU** button repeatedly to exit and return to normal TV picture.

### Swap

Use this channel swapping feature to swap the channels between two stored programme positions. This feature is particularly useful after automatic tuning.

You have to choose a programme that you wish to swap on the TV set. eg. Swap programme position 4 and 12.

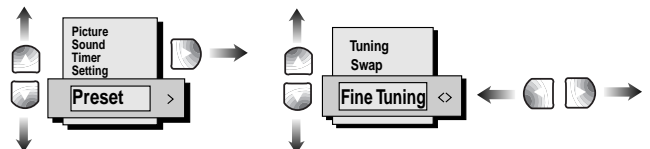
1. Select programme position 4.
2. Press the **MENU** button.
3. Select **Preset** by pressing **▲** or **▼** buttons. Follow the diagram below.



4. Enter the programme number (12), press **▶** and the channels are swapped.

### Fine tuning

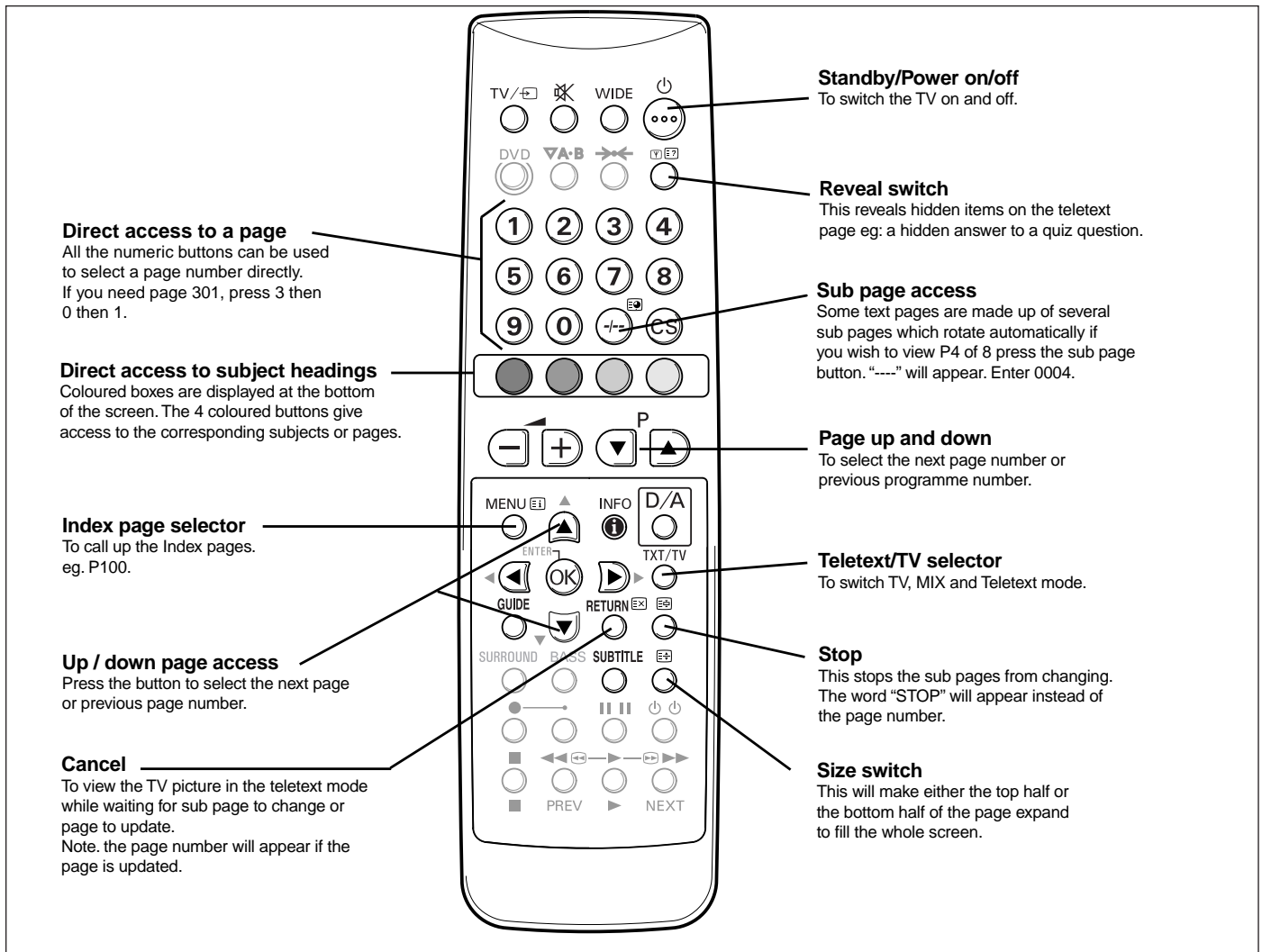
1. Press the **MENU** button.
2. Select **Preset** by pressing **▲** or **▼** buttons. Follow the diagram below. Press **▶** to enter.



3. Press **▲** or **▼** to select Fine Tuning, press **▶** to fine tune channels.

The tuning will be stored when you exit the menu.

## TELETEXT OPERATION - Analogue channels



### Teletext

**Teletext** - This is a free service to give you lots of varied information such as news, sports results, weather and travel features.

#### Teletext reception

If your aerial signal is poor, the teletext reception operation may be erratic.

#### Teletext brightness level

You can change the teletext brightness level. Please return to TV mode. (See Picture menu -Text Bright on page 12).



#### Sound volume control

In teletext mode sound volume and muting can be controlled. However they are not displayed on the screen.

## ■ Switching into /from standby mode

The Standby mode is used for switching the TV set off for short periods of time. In standby mode the TV is switched off but is still receiving mains power.

- To turn the TV set into standby mode, press the **⏻ button**.  
*The red power indicator illuminates more brightly.*
- To turn the TV set ON from standby mode, press any of the following buttons: **⏻, P▲, P▼** or **0-9 buttons**.

	If you find the power indicator flashing, please turn the TV set off completely with the Mains ON/OFF switch and contact our Service desk.
	This warning is a sign to let you know that the power protection function of this TV set is now operating.

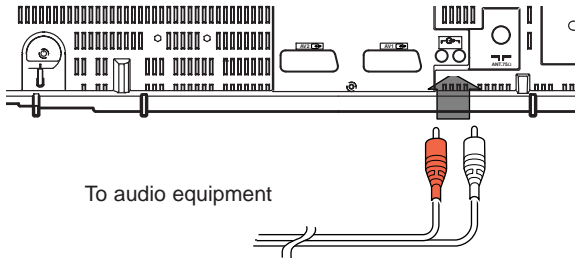
## ■ Auto shut off

This TV set will automatically switch into the standby mode, 10 minutes after a signal is no longer received. The time until the set will switch off is displayed on the screen. **⚠ No signal**. will also appear in digital mode.

✍ *When the TV set is switched on by using the ON-Timer function with no signal being received, this function will be ignored.*

## ■ Use of Audio Output Jacks

This TV provides the audio monitor output jacks on the rear of the cabinet back. You can connect your audio equipment to these jacks to give you sound through your audio equipment.





# OPERATION

## Selecting of picture size

### ■ Screen options

Today there are various transmission formats with different size ratios, eg. 4:3, 14:9, 16:9 and video formats such as letterbox.

### ■ AUTO

It automatically switches to the optimum screen mode according to the WSS signal provided in the receiving signal source. If the signal does not have it, the TV keeps current screen mode.





✓ This setting may cause the picture to change when a different format is received eg. when an advert is received.

✓ WSS (Wide screen signalling)





Some broadcasters transmit this signal and some VCR tapes have it included. The signal identifies the picture format ratio (16:9, 14:9, 4:3 etc.).

If WSS is not being received and you are not happy with your picture this TV provides you the option to change it with the following options.





Press the **WIDE** button repeatedly to select your desired setting.

4:3	14:9	16:9	Letterbox Video
			
Stretches the picture horizontally to fill the screen. The picture is more stretched at the edges.	The height is expanded to fill the whole screen.	The picture fills the screen and is proportionally correct.	The black bars top and bottom remain and the height is compressed to fit the picture area.





### ■ ZOOM (14:9)

4:3	14:9	16:9	Letterbox Video
			
The correct picture width is maintained but the top and bottom are cropped.	Zooms in slightly cropping the top and bottom.	Zooms in slightly cropping the top and bottom.	The black bars top and bottom are smaller and the picture height is compressed slightly.





### ■ TITLE IN (14:9)

4:3	14:9	16:9	Letterbox Video
			
As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.	As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.	As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.	As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.





### ■ ZOOM (16:9)

4:3	14:9	16:9	Letterbox Video
			
The correct picture width is maintained but the top and bottom are cropped.	Zooms in slightly cropping the top and bottom.	Zooms in slightly cropping the top and bottom.	The black bars top and bottom are smaller and the picture height is compressed slightly.





### ■ TITLE IN (16:9)

4:3	14:9	16:9	Letterbox Video
			
As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.	As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.	As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.	As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.

### ■ FULL

4:3	14:9	16:9	Letterbox Video
			
The whole screen is filled stretching the width.	The whole screen is filled stretching the height slightly at the edges.	The whole screen is filled with the correct picture ratio.	The black bars top and bottom are present and the height is compressed.









### ■ NORMAL

4:3	14:9	16:9	Letterbox Video
			
The correct ratio is maintained with black bars on the left and right.	Black bars left and right, picture height is stretched.	Black bars left and right, picture height is stretched.	Black bars left, right, top and bottom.

## VCR / DVD controls

This remote control transmitter has been designed to be used in conjunction with selected SANYO VCR's and DVD players. Some SANYO VCR's and DVD players may have their own functions, so please refer to the individual instruction booklet when using this remote control to ensure compatibility.

Some of the keys are used for both the VCR and DVD player. The symbols indicated with blue are for the keys to control the DVD player. When you use the DVD player with this remote control, first press and hold the **DVD** button and then press your

	VCR	DVD
	Power	Power
	Play	Play
	Pause	Pause
	Stop	Stop
	Fast/Cue	Next chapter selection
	Rewind/Review	Previous chapter selection
	Record, press both button at same time.	
<b>DVD</b>	n/a	DVD command mode selection
<b>OK</b>	n/a	Enter
	n/a	Cursor selection

desired control button each time.

# TV SPECIFICATIONS

## TV specifications

### Common specification

Power source	AC 220~240V 50Hz	
Television system	System I	
Colour system	PAL/NTSC4.43 (PAL/NTSC4.43/NTSC3.58 in AV mode)	
Channel coverage	UHF: 21-69.	
Aerial input impedance	75 ohm	
AV terminal		
	AV1:	CENELEC Standard
	Input:	Composite video, RGB and audio-L/R
	Output:	TV-output with composite video and audio-L/R
	AV2:	CENELEC Standard
	Input:	Composite video, RGB, S-VHS and audio-L/R
	Output:	Monitor-output with composite video and audio-L/R
Front AV terminal	AV3:	RCA jacks
	Input:	Composite video and audio-L/R
Heaphone socket	Mini Jack	
Sound output	<b>CE28DFN2-B</b>	<b>CE32DFN2-B</b>
(Continuous)	2 x 10W	2 x 10W
Picture tubes		
(inches)	28	32
Dimensions		
(WxHxD mm)	786 x 519 x 504	880 x 575 x 549
Weight (kg)	34.5	46.3

## Helpful hints

### ■ NO PICTURE, NO SOUND

- Check if TV is plugged in.
- Try a different channel, if OK, probably station trouble.

### ■ POOR PICTURE, SOUND OK

- Adjust BRIGHTNESS control.
- Adjust FINE TUNING control.
- Check aerial connections.

### ■ NO COLOUR, PICTURE OK

- Adjust COLOUR control.
- Adjust FINE TUNING control.
- Is the programme in colour ?

### ■ WEAK PICTURE

- Check aerial connections on back of set.
- Check aerial for broken wires.
- Re-orient aerial.

The following faults are not caused by the receiver:

### "GHOSTS"

Reflections of signals from mountains or high buildings will cause multiple images, called "Ghosts". These abnormal conditions can be reduced to minimum by repositioning aerial or by installing new one suited for your area.

### "INTERFERENCE"

Interference may be caused by electrical appliances, car ignition systems, etc. This should normally be a temporary condition, but should this interference persist, contact your dealer.

## Servicing

Your television is fully transistorised and does not contain any user serviceable components.

You must not remove the rear cover of the TV by yourself. The apparatus is working with high voltages and could damage objects or even endanger people. Leave all required repair and service jobs to an authorised service technician. He will exclusively use such spare parts that are complying with the same safety standards as applicable to the original parts. The use of original spare parts can prevent fire, shock and other hazards.

Unplug the television receiver from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- If the power cord or plug is damaged.
- If liquid has been spilt into the television receiver.
- If television receiver has been exposed to rain or water.
- If the television receiver has been dropped or the cabinet has been damaged.
- If the television receiver exhibits a distinct change in performance.
- If the television receiver does not operate normally by following the operating instructions.



Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage. This will often require extensive work by a qualified technician to restore the television receiver to normal operation.

## WARRANTY TO CUSTOMER

Sanyo U.K. Sales Ltd. (the company) warrants to the initial retail purchaser that if this equipment is or becomes defective and that, in the opinion of the Company, the defect is due to faulty material or workmanship the Company will, for a period of 12 calendar months from the date of sale to the original purchaser repair or replace, at its sole option, free of charge, any such defective component part of the equipment, always provided that:-

- 1: The equipment has at all times been used in accordance with the operating instructions issued by the Company, and has not been connected to an electrical mains supply for which it has not been adjusted.
- 2: Accidental damage or damage caused by negligence of misuse by the user, is specifically excluded.
- 3: Unauthorised repairs, or any modification to the equipment which has not been expressly approved by the Company, shall render this warranty null and void.
- 4: Failure due to fair wear and tear of any item is specifically excluded.

This warranty is not transferable and is only applicable within the United Kingdom (and the Republic of Ireland). Nothing in this express warranty affects the statutory rights available to the purchaser of this equipment.

Note: This warranty supersedes any other form of guarantee that may inadvertently have been enclosed with or attached to the product.

### **Dear Customer.**

Thank you for buying SANYO. This equipment should give you many years of pleasure and faithful service but in the event that a fault occurs, the following notes for your guidance may be helpful:-

- 1: PLEASE RETAIN YOUR PURCHASE RECEIPT WHICH WILL BE REQUIRED FOR SERVICE DURING WARRANTY.
- 2: If your Sanyo equipment proves faulty during the period of guarantee, take it or send it back to the dealer who originally supplied it together with this guarantee and the proof of purchase. We have made arrangements with our approved dealers under which they will carry out inguarantee service repairs on our behalf. In this way, we hope to reduce to a minimum the amount of time you will be without your equipment.
- 3: If for some reason it is impossible to return the equipment to the original supplier, please contact our Service Department at the address below for further advice.
- 4: Should the equipment require servicing after the expiry of the guarantee period, take or send it to the original supplier or any other Sanyo dealer. He will be pleased to give you a quotation for the repair.

Service Department,  
Sanyo UK Sales,  
(A Division of SANYO Europe Ltd.), Sanyo House,  
Otterspool Way,  
Watford, Hertfordshire, WD2 8JX.  
Tel: 01923 246363

